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ABSTRACT

School climate is an important factor that affects student achievement. Little research has been done, however, on factors that might impact school climate and culture. This study investigated the impact of teachers' gender, experience, number of years at a school, and degree status on the culture and climate of a school. Twenty-five schools and 1,163 teachers were involved. The "Instructional Improvement Survey" was used to measure school culture and climate. Results are analyzed statistically. They show that degree status did not make a difference. Female teachers, more experienced teachers, and teachers with more years at a school were more positive about the culture and climate of their school. Teachers with 2-10 years' experience were the least positive about their schools' culture and climate. There is a need to improve levels of openness and trust in most schools, thereby improving their overall culture and climate. The data also reveal that administrators need to spend more time with teachers who have 2-10 years of experience at a school. These teachers are at risk of leaving the profession, and with the teacher shortage, they cannot be ignored. Appendix A describes the variables used in measuring school culture and climate. (Contains 21 references.) (RT)

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DEMOGRAPHIC FACTORS

THE IMPACT OF DEMOGRAPHIC FACTORS ON SCHOOL CULTURE AND CLIMATE

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The Impact of Demographic Factors on School Culture and Climate

ABSTRACT

This research investigated the impact of gender, experience, number of years at a school, and degree status on the culture and climate of a school. Twenty-five schools and 1163 teachers were involved in the study. Female teachers, more experienced teachers, and teachers with more years at a school were more positive about the culture and climate of their school. Degree status did not make a difference. Teachers with 2-10 years experience were the least positive about their school's culture and climate.

Introduction

The importance of school climate and to some extent culture for an effective school has been the subject of extensive research. Bulach, Malone, & Castleman (1994), in their research on 20 schools found a significant difference in student achievement between schools with a good school climate and those with a poor school climate. They also cited 17 references in their review of literature in support of this relationship. The relationship between school climate and achievement continues to be researched. Hirase (2000) and Erpelding (1999), found that schools with a positive climate had higher academic achievement.

While there is a plethora of research showing the importance of school climate for achievement, there is also some research that supports its importance for other factors. For example, Bulach and Malone (1995) in their work with 20 schools, investigated the relationship between school climate and how effectively two reforms (school-based decision making and/or the non-graded primary)were being implemented in Kentucky schools. They found significant positive relationships (+.50 and +.40, $p < .001$) between school climate and how effectively school faculty perceived the reforms to be implemented.

Other research links school climate to job satisfaction, levels of work-efficacy, and teacher autonomy. Bahamonde-Gunnell (2000) found that teachers who were satisfied with their jobs had more positive views about school climate than those who were not satisfied. Hirase's (2000) research found that teachers have a greater sense of work-efficacy in schools where there is a good climate. Erpelding (1999) found a strong relationship between teacher autonomy and school climate. Research that did not find a link was completed by Bulach, Lunenburg, & McCallon (1995). They investigated the impact of leadership style on school climate and found no significant difference in climate as a result of leadership styles.

Sergiovanni and Starratt (1998) and Lunenburg and Ornstein (2000) are two of the leading authors of leadership training textbooks for educational administrators. They both devote a chapter to school climate and its importance for the effective operation of a school. In summary, there is a great deal of support for school climate as an important factor that can directly and indirectly affect student achievement.

However, other than the leadership style research mentioned above, there was very little research devoted to factors that might impact school climate and culture. Johnson (1998) stated that there is a need for better measures of school effectiveness. He indicated that there was a particular need to look at teacher characteristics. Gallimore (2001) wrote that if we want to improve schooling and achievement we will have to investigate the dynamics of culture that affect individual students and schools. The research of Franklin (1989), looked at the effect of school climate and some demographic factors on teacher efficacy. He found that gender, teaching level, and setting did affect teacher efficacy, but that school climate did not. The relationship of these factors to school climate was not mentioned. It is possible that if these demographic factors have an effect on teacher efficacy, they might also have one on school climate. Hodgkinson (1998) described the changing student demographics that are occurring in the United States and the challenge of blending many cultures and faiths. If student demographics can affect the way schools are or should be run, it logically follows that faculty demographics could also be a factor.

Purpose of this research

The purpose of this research was to investigate the impact of selected demographic factors on school culture and climate. If factors such as **levels of training, gender, experience, and years teaching at a school** influence how teachers perceive the culture and climate of the school, this would provide school administrators with additional insight in shaping a school's climate and culture. For example, if older more experienced faculty and/or with more education have better or poorer perception's of a school's climate and culture, then the plan to improve culture/climate could be more focused.

Definitions

culture/climate: those psychological attributes (culture) and institutional attributes (climate) that give an organization its personality (Bulach, Lunenburg, and McCallon, 1995). An analogy of an iceberg can be used to further explain climate and culture. The part of the iceberg that can be seen above the water could not exist without the part the that cannot be seen below the water. The climate variables can be seen whereas the culture variables cannot be seen and like the iceberg, climate cannot exist without the underlying value and belief systems that form the culture (see instrumentation for the culture and climate variables). Petersen and Deal (1998) define culture as the set of values, beliefs, traditions, and rituals built over time. While this is the more commonly accepted definition of culture, we prefer ours because it distinguishes between two concepts that are closely intertwined: culture and climate.

Methodology

This causal-comparative study involved six high schools, seven middle schools, and twelve elementary schools. Data were gathered from 1163 teachers regarding their perceptions of each school's culture/climate. School officials at these schools volunteered to take part in this study as

part of their involvement in a grant to implement a character education curriculum (Bulach, 2001). The data were collected at a faculty meeting. The administration convened the meeting and explained that their responses were confidential. They were told to complete the survey and turn the data over to one of the teachers who would place it in an envelop, seal it, and turn it in to central office personnel. The data were then sent to the authors for analysis.

Instrumentation

The instrument that measures culture/climate is called the "Instructional Improvement Survey." It consists of four items that measure the demographic factors and 96 behaviors that measure a school's culture and climate. The culture variables (psychological attributes) are as follows: group openness, group trust, group cooperation, and group atmosphere. The climate variables (institutional attributes) are also the effective school variables as follows: discipline, instructional leadership, classroom instruction, expectations, parent/community involvement, assessment/time on task, and sense of mission. The instrument has an overall reliability of + .95 as measured by the Cronbach alpha. Reliability on each of the subscales varies from +.79 to +.85 (Bulach, 2001). Teachers respond to each of the 96 behaviors on a five-point Likert scale ranging from "completely disagree" to "completely agree." Completely disagree was scored as a "one" and completely agree was scored as a "five." An agree response was scored as a 4.0. Since nine of the factors are measured by eight behaviors, a score of 32 (4 x 8 = 32) is considered a strength and scores below 32 are considered areas needing improvement. Group trust and group openness have more than eight behaviors and have been mathematically controlled to equal a score of 32 (see Appemndix A for a listing of the behaviors for each culture/climate factor).

Method of Analysis

One-way analysis of variance (ANOVA) was the statistical test of significance used to evaluate the role of levels of training, years of experience, and years teaching at a school on the 11 factors that make up a school's culture/climate. The t-test for independent groups was used to evaluate the role of gender and its impact on the 11 factors that make up a school's culture/climate. In further analysis, the Crosstabs function of SPSS, was used to evaluate the impact of the demographic factors on each of the 96 behaviors associated with the 11 culture/climate factors. Kendall's Tau-b was the statistical test of significance used for this analysis.

Results/discussion

The data clearly indicate that gender is a major variable impacting the 11 factors that make up the measure of culture/climate (see table 1). The t-score for nine of the 11 factors was significant ($p < .05$). After using the Bonferoni technique to adjust for multiple t's, six of the factors were still significant ($p < .00$). Those six factors were as follows: group trust, classroom instruction, expectations, parent/community involvement, assessment/time on task, and sense of

mission. While the remaining five factors were not significant, it is remarkable that females had more positive scores on all 11 factors.

Table 1
The impact of gender on the 11 factors that measure a school's culture/climate.

Factor	Gender	N	Mean	SD	t-score	P
group trust	M	219	29.2	4.3	3.9	.000****
	F	873	30.5	4.4		
group openness	M	225	24.1	4.4	.2	.861
	F	883	24.0	4.4		
group cooperation	M	208	28.1	5.0	1.7	.080
	F	855	28.9	5.6		
group atmosphere	M	218	26.9	4.8	2.3	.021*
	F	878	27.8	5.4		
sense of mission	M	213	28.2	5.4	5.7	.000****
	F	852	30.7	5.8		
parent/community	M	214	30.6	4.4	4.6	.000****
involvement	F	868	32.3	4.8		
classroom instruction	M	219	29.0	3.6	5.1	.000****
	F	865	30.5	3.9		
discipline	M	217	28.5	5.2	2.5	.010**
	F	871	29.5	5.5		
assessment/	M	213	29.8	4.3	4.0	.000****
time on task	F	859	31.2	4.7		
instructional	M	215	28.6	5.2	2.1	.033*
leadership	F	860	29.5	5.6		
expectations	M	218	29.7	4.0	6.1	.000****
	F	864	31.7	4.4		

* P < .05 **P < .01 ***P <.000 ****P <.000

In looking at the individual behaviors (see table 2) that make up each factor, it is amazing that female faculty have more positive responses on all 96 behaviors than male faculty. The factor with the most statistically significant behaviors between male and female faculty was on "expectations." Analysis of each of the eight behaviors for this factor, using Kendall's Tau-b, revealed statistically significant differences on seven of the behaviors with six of the behaviors significant at the .000 level (for a listing of each of the behaviors by culture/climate factor, see appendix A). The behavior in this factor with the greatest difference in positive responses was the behavior "Teachers believe that every student can learn and can improve." Female faculty had an 81.2% agree response on this behavior compared to male faculty with a 65.8% agree response.

Parent and community involvement was the next factor with the most statistically significant behaviors. Using Kendall's Tau-b, there were four behaviors that were significant at the .000 level and the remaining four were also significant ($p < .05$). The behavior in this factor with the greatest difference in positive responses was the behavior "The relationship that exists between parents and the teachers is a good one." Female faculty had a 66.1% agree response on this behavior compared to male faculty with a 52.8% agree response

The data for the remaining factors can be viewed in table 2. For expediency purposes all of the data will not be discussed. The researchers will report and discuss those thought to have the most merit. Group trust was interesting because of the number of behaviors that were statistically significant. Female faculty were more positive on nine out of the 14 behaviors in that factor. One possibility for explaining why female faculty are more trusting could be caused by more females having elementary backgrounds. Bulach (2001) found that elementary faculty had higher levels of trust than middle and high schools. Since a greater percentage of males had a middle and high school background this could account for lower male faculty trust scores. This same possibility exists with the classroom instruction factor. Elementary teachers who are primarily female could be responsible for the greater percentage of agree responses (81.7% vs 70% for male faculty, $p < .000$) to the behavior "Teachers help students to feel good about themselves." One other possibility could be the prevalent practice of assigning the more difficult students to the classrooms of male teachers. Having more difficult students could cause male teachers to be less positive.

Table 2
A comparison of male and female faculty agree responses on selected behaviors associated with each of the 11 culture/climate factors.

Behavior	Factor	Gender	% agreement	Kendall's Tau-b	P
I rely on them to keep a confidence.	group trust	M	39.1	3.9 .	000****
		F	53.8		
I ask them about their feelings	group openness	M	17.7	4.9	.000****
		F	31.1		
A parent advisory council assists the administration with decisions.	group cooperation	M	36.9	3.24	.001****
		F	48.1		
Teachers are sensitive to the needs of students.	group atmosphere	M	74.6	3.8	.000****
		F 0	79.4		
The faculty was involved in creating the mission.	sense of mission	M	68.4	6.0	.000****
		F	80.2		

The relationship between parents and the teachers is a good one.	parent/community involvement	M F	52.8 66.1	3.8	.000****
Teachers help students to feel good about themselves.	classroom instruction	M F	70.0 81.7	6.0	.000****
Communication with parents about student misbehavior is appropriate.	discipline	M F	73.0 62.6	4.5	.000****
Classroom management practices are effective in keeping students on task.	assessment/time on task	M F	64.5 75.8	4.3	.000****
The administration helps teachers to grow professionally.	instructional leadership	M F	74.1 78.0	3.5	.000****
Teachers believe that every student can learn and can improve.	expectations	M F	65.8 81.2	3.7	.000****

****P <.000

The analysis of the data to measure the impact of degree status on the 11 culture/climate factors showed that only two of the factors were statistically significant (see table 3) Those two factors were classroom instruction ($p < .05$ and group openness ($p < .05$). Tukey's test was applied to the ANOVA to determine if any of the means were significant. In both cases, there was a significant difference between bachelor degree teachers and "other" ($p < .05$). In comparing the means there was no significant difference between faculty with differing degree status. Any differences appear to be caused by those personnel classified as "Other." "Other," in this case, stands for para-professionals who normally do not have degrees. Apparently, they are less willing to be open and are less positive about classroom construction. Less openness is easy to understand since without a degree, they are not on the same status. In looking at the individual behaviors (see Table 4) that make up this construct, only 2.2% of para-professionals agree with this behavior "I ask them what they think of the way I do things," and only 13.3% agreed with "I am willing to share my feelings with them."

Table 3
The impact of degree status on the 11 factors that measure a school's culture/climate.

Factor	degree status	N	Mean	SD	F-score	P
group openness	B.S	457	24.3	4.5	2.4	.045*
	M.Ed.	487	23.9	4.5		
	Ed. S.	105	24.1	4.7		
	Ed.D	23	23.3	4.1		
	Other	43	22.2	4.4		

classroom instruction	B.S	449	30.2	3.9	2.8	.026*
	M.Ed.	476	30.4	3.9		
	Ed. S.	105	30.0	3.9		
	Ed.D	22	29.8	4.2		
	Other	42	28.4	3.9		

* P < .05

Regarding the classroom instruction factor only one behavior in that construct was significant (Kendalls Tau-b = 2.2, p < .03). That behavior was "Homework assignments are appropriate for the student and subject." This behavior received the most positive response of all the behaviors for this construct. Para-pros agree 65% of the time with this statement compared to bachelor degree teachers with an 80% agree response. Parapros again, with a 65% agree response were the least positive compared to others with agree responses as high as 83%. This could be because they have their own children in the school and have to help with homework at home each night. Similar results were received with the parent community involvement factor. Parapros with a 63.9% agree response on the behavior "It is easy for parents to find out what their child(ren) must do for homework" were much lower than others with agree responses as high 86.9%. The only pattern to be noticed with the data was that Parapros always had the lowest scores. The highest scores varied from behavior to behavior and degree status. For example, bachelor degree faculty had the highest score on the trust behavior; masters degree faculty had the highest score on the classroom instruction behavior; specialist faculty had the highest score on the expectations behavior, and doctorate faculty had the highest score on the parent and community involvement behavior. A similar pattern occurred with the rest of the data. Degree status is not a factor affecting levels of school culture/climate.

The behavior "I believe that they care about me" in the group trust construct that was significant (Kendall's Tau-b, p < 005) is very disturbing and coincides with the openness data. On the openness behavior "I am willing to share my feelings." most agree responses were in the 30% range. The behavior "I ask them what they think about the way I do things" is even lower. Of the 96 behaviors measured by the survey, this is the behavior with the lowest scores. There appears to be a need for more openness and trust as these scores are lower than they should be. The scores for openness for both male and female faculty were 24.0 (mentioned earlier) and a score of 32 is needed for an "agree" response. In related research, Bulach (2001) found a +.68 correlation between openness and trust and correlations between openness and trust and the overall culture/climate score were + 62 and +.85 respectively. Clearly, there is a need to improve levels of openness in most schools. Improvement in these two factors should improve the overall culture/climate of a school.

Table 4 **(Note: all underlined items are reverse scored and indicate the % disagree responses)** The impact of degree status on selected behaviors associated with the 11 factors that measure a school's culture/climate.

Behavior	Factor	Degree Status	% agreement	Kendall's Tau-b	P
I believe that they care about me.	group trust	B.S	63.5	2.8	.005***
		M.Ed.	56.5		
		Ed. S.	56.6		
		Ed.D	52.1		
		Other	53.4		
I am willing to share my feelings with them.	group openness	B.S	40.5	3.8	.000****
		M.Ed.	30.9		
		Ed. S.	32.1		
		Ed.D	30.4		
		Other	13.3		
I ask them what they think about the way I do things.	group openness	B.S	24.8	3.2	.002****
		M.Ed.	19.5		
		Ed. S.	19.8		
		Ed.D	17.4		
		Other	2.2		
It is easy for parents to find out what their child(ren) must do for homework.	parent/community Involvement	B.S	79.5	3.0	.002***
		M.Ed.	80.8		
		Ed. S.	76.0		
		Ed.D	86.9		
		Other	63.9		
Homework assignments are appropriate for the student and subject.	classroom instruction	B.S	79.8	2.2	.027*
		M.Ed.	83.1		
		Ed. S.	72.3		
		Ed.D	82.6		
		Other	65.9		
The administration makes sure that teachers have adequate materials and supplies.	instructional leadership	B.S	58.7	2.9	.004***
		M.Ed.	63.1		
		Ed. S.	70.8		
		Ed.D	63.7		
		Other	61.9		

Teachers place more emphasize on regurgitation of facts than they do on application.	expectations	B.S	53.1	2.1	.037*
		M.Ed.	58.7		
		Ed. S.	71.2		
		Ed.D	63.6		
		Other	57.5		

* P < .05 **P < .01 ***P < .00 ****P < .000

The length of time a faculty member has been at a school has a definite effect on their perception of a school's culture/climate (see table 5). The analysis of the data using ANOVA resulted in significant differences for all of the 11 factors that make up a school's culture/climate. Tukey's test was applied to the ANOVA data to determine if any of the means were significant. In every instance, teachers with 2-5 years at the school were less positive than teachers with 11-20 years ($p < .00$). They were also less positive than teachers with 21+ years at the school on seven of the 11 factors ($p < .05$). Teachers with 6-10 years at the school were less positive on five of the factors ($p < .05$). Further analysis of the means shows that teachers with 2-5 and 6-10 years at a school have lower means on every one of the 11 culture/climate factors. They also have lower means than first year teachers on nine of the 11 factors. In no instance was there a significant difference in the means for teachers who had been at a building 10-20 years versus those who had been their 21+ years. The data clearly support the conclusion that teachers who have been at a school for more than 10 years are more positive about a school's culture/climate.

Table 5
The impact of number of years in the building on the 11 factors that measure a school's culture/climate.

Factor	number of years	N	Mean	SD	F-score	P
group trust	One	266	30.0	4.5	4.3	.002***
	2-5.	351	29.7	4.8		
	6-10.	199	29.8	4.0		
	11-20	206	31.2	3.8		
	21+	80	30.1	4.7		
group openness	One	267	23.5	4.3	4.7	.001***
	2-5.	355	23.9	4.3		
	6-10.	205	23.9	4.3		
	11-20	208	25.2	4.5		
	21+	82	24.4	5.0		

group cooperation	One	248	29.3	5.6	4.7	.001***
	2-5.	348	27.7	5.7		
	6-10.	193	28.7	5.2		
	11-20	202	29.4	5.0		
	21+	81	29.0	5.3		
group atmosphere	One	265	28.6	6.0	10.3	.000****
	2-5.	353	26.2	5.2		
	6-10.	199	27.4	4.6		
	11-20	206	28.5	5.0		
	21+	82	28.4	5.6		
sense of mission	One	238	28.8	5.9	16.6	.000****
	2-5.	355	29.4	6.0		
	6-10.	194	29.1	5.6		
	11-20	206	32.3	5.5		
	21+	81	33.0	4.5		
parent/community involvement	One	256	32.3	4.9	6.9	.000****
	2-5.	348	30.9	5.2		
	6-10.	200	31.8	4.3		
	11-20	204	32.9	4.3		
	21+	83	32.6	4.2		
classroom instruction	One	261	30.1	4.2	7.2	.000****
	2-5.	351	29.5	4.0		
	6-10.	199	30.0	3.6		
	11-20	199	31.3	3.5		
	21+	83	30.9	4.0		
discipline	One	259	29.8	5.9	7.9	.000****
	2-5.	351	28.1	5.5		
	6-10.	203	29.1	5.0		
	11-20	203	30.6	4.6		
	21+	81	29.9	5.4		
assessment/time on task	One	258	31.1	4.9	6.9	.000****
	2-5.	343	29.8	4.9		
	6-10.	198	30.5	4.1		
	11-20	200	30.6	4.4		
	21+	81	29.9	4.6		
instructional leadership	One	260	29.8	5.8	6.9	.000****
	2-5.	348	28.5	5.6		
	6-10.	199	29.2	5.4		
	11-20	203	30.3	5.3		
	21+	81	29.3	5.6		

expectations	One	263	31.2	4.95	5.5	.000****
	2-5.	345	30.6	4.5		
	6-10.	199	31.1	4.6		
	11-20	203	32.3	4.0		
	21+	81	32.0	4.4		

*** P < .00 ****P < .000

A look at the individual behaviors, using Kendall's Tau-b, that make up each of the factors showed significant differences on 45 out of the 96 behaviors. The behavior in group openness dealing with feelings is similar to the behavior listed in table 4, where only 30% of the faculty reported that they were willing to share their feelings. It would appear that most faculty are unwilling to ask about other's feelings and are unwilling to share them. This is a disturbing finding! On the other hand, there are also findings that are very positive. The behavior in group trust about counting on each other to do what they say they are going to do was fairly positive. Also, the behavior in the group atmosphere factor dealing with being sensitive to student needs was very positive. In both instances, however, it was the faculty with 10 or more years at a school that were the most positive.

Table 6 **(Note: all underlined items are reverse scored and indicate the % disagree responses)** A comparison of agree responses for faculty with differing years at a school on selected behaviors associated with each of the 11 culture/climate factors.

Behavior	Factor	Years at school	% agreement	Kendall's Tau-b	P
I count on them to do what they say they are going to do.	group trust	One	71.1	2.5	.01**
		2-5	70.1		
		6-10	68.8		
		10-20	81.4		
		21+	84.3		
I ask them about their feelings.	group openness	One	24.1	4.5	.000****
		2-5	26.1		
		6-10	29.4		
		10-20	33.4		
		21+	28.8		
Teachers are sensitive and responsive to the needs of students.	group atmosphere	One	77.0	3.1	.002**
		2-5	72.1		
		6-10	80.6		
		10-20	86.1		
		21+	82.1		

The school's mission is posted for everyone to see.	sense of mission	One	61.4	4.5	.000****
		2-5	69.6		
		6-10	72.2		
		10-20	86.0		
		21+	91.6		
It is easy for parents to find out how their child is doing academically.	parent/community	One	87.6	3.7	.000****
		2-5	79.6		
		6-10	88.8		
		10-20	96.8		
		21+	96.6		
Teachers vary instructional strategies according to the needs of the students.	classroom instruction	One	77.0	4.5	.000****
		2-5	71.8		
		6-10	79.5		
		10-20	89.5		
		21+	78.7		
The procedure the administration has in place for discipline is effective.	discipline	One	53.9	2.1	.035*
		2-5	70.2		
		6-10	57.7		
		10-20	66.3		
		21+	55.5		
Student achievement data are used to evaluate the effectiveness of a program or change in the curriculum	assessment/time on task	One	59.6	4.5	.000****
		2-5	56.9		
		6-10	62.1		
		10-20	66.7		
		21+	73.8		
The administration makes sure that teachers have adequate materials and supplies.	instructional leadership	One	56.9	4.5	.000****
		2-5	56.7		
		6-10	63.7		
		10-20	71.2		
		21+	76.2		
Teachers place more emphasis on regurgitation of facts than they do on application	expectations	One	53.8	3.0	.002***
		2-5	53.0		
		6-10	52.4		
		10-20	64.9		
		21+	69.5		

* P < .05 **P < .01 ***P <.000

Faculty with 10 or more years at a school were more positive on the other behaviors as well with the exception of the behavior dealing with discipline. Faculty with 21+ years experience had a 55.5% agree response compared to 70% for faculty with 2-5 years at the school. First year faculty with a 53.9% agree response were the least positive. It is possible that first year faculty are not as familiar with the procedures and that is why they are less positive. Faculty with 2-5 years would be

familiar because they would have used it the most compared to faculty with 21+ years who would tend to take care of their own discipline problems. Familiarity with the system could account for the difference in opinion regarding the effectiveness of discipline procedures.

Overall, there are a few positive indicators of a good school culture/climate. For example, faculty believe (scores range between 79.6%-96.6%) parents can find out how their child is doing academically. Similar beliefs were found regarding the school's mission statement and the practice of varying instructional strategies according to the needs of the students. In every instance, however, it was the senior faculty at a school who were the most positive. One possibility for explaining this phenomenon could be the fact that the senior faculty, because of their length of time at the school, have helped to shape the culture and climate of the school. As a result they are more comfortable and positive about it. Regardless, faculty members, with ten or more years at a school, are more likely to be positive about the school's culture/climate.

The number of years teaching experience for a faculty member is also a major variable affecting the climate factors, but not the cultural factors. Six of the seven climate factors had F-scores that showed significant differences within the group. There were no significant differences within the group for the four culture variables. This varies considerably from the comparison for the number of years in a building where significant differences were found for all 11 factors. A possible explanation for this could be the number of teachers with 21+ years experience. Two hundred and eighty teachers reported 21+ years experience, but only 80 had their experience in the same building. Another major difference was the grouping of teachers. In the previous analysis for number of years in a school the grouping was for one year at the school and 2-5 years at the school. In the analysis for years experience, the grouping was for 0-5 years, 6-10 years, and 11-15 years. This is probably the reason for the difference in the comparison years teaching versus years at a school. However, the data tends to support the opinion that the number of years at a school is more important than the years' experience.

Table 7
The impact of number of years teaching on the 11 factors that measure a school's culture/climate.

Factor	number of years	N	Mean	SD	F-score	P
sense of mission	0-5	313	29.5	5.9	4.6	.001***
	6-10.	192	29.4	5.8		
	11-15.	156	29.1	5.6		
	16-20	117	32.3	6.0		
	21+	280	33.0	5.5		
parent/community	0-5	312	31.4	5.2	3.3	.010**
involvement	6-10.	192	31.4	5.0		
	11-15.	160	32.1	4.7		
	16-20	122	31.9	4.9		
	21+	284	32.7	4.2		

classroom instruction	0-5	316	29.7	4.0	3.0	.018*
	6-10.	194	30.1	3.9		
	11-15.	167	30.3	3.9		
	16-20	117	30.5	3.8		
	21+	281	30.8	3.8		
discipline	0-5	313	28.2	5.9	5.8	.000****
	6-10.	195	28.9	5.2		
	11-15.	168	30.0	5.2		
	16-20	121	29.3	5.4		
	21+	281	30.1	5.0		
assessment/time	0-5	312	29.9	5.0	6.1	.000****
on task	6-10.	189	30.5	4.5		
	11-15.	164	31.1	4.7		
	16-20	118	31.3	4.6		
	21+	280	31.7	4.5		
instructional leadership	0-5	312	28.7	5.5	2.6	.035*
	6-10.	190	28.7	5.6		
	11-15.	165	29.6	5.3		
	16-20	117	29.8	6.0		
	21+	282	29.9	5.5		

**P < .01 *** P < .001 ****P < .000

A comparison of the means for the 11 factors revealed that teachers with 0-5 and 6-10 years were again less positive than teachers with more experience on all 11 factors. Further teachers with 0-5 years were less positive than teachers with 6-10 years experience on ten out of the 11 factors. Tukey's test was applied to the ANOVA data to determine if any of the means were significant. When the means of teachers with 0-5 years experience were compared to teachers with 21+ years experience, there were significant differences ($p < .01$) for five of the 11 factors. Those factors were the following: sense of mission, parent involvement, classroom instruction, discipline, and assessment/time on task. When the means of teachers with 6-11 years of experience were compared to teachers with 21+ years experience, there were significant differences on three of the same factors as 0-5 year teachers, except for parent involvement and classroom instruction ($p < .00$). While the 0- 5 and 6-10 year teachers were less positive than 11-15 and 16-20 year teachers on all the means, none of the means were statistically significant.

A comparison of the individual behaviors that make up each factor revealed statistically significant differences on 46 out of the 96 behaviors. One behavior for each factor was selected and listed in Table 8 for analysis purposes. A similar pattern, with a few exceptions, emerges as with the previous analysis. Teachers with less than five years experience are less positive than teachers with more than five years. Teachers with more than five years and less than ten are less positive than teachers with more experience. In looking at the data in table 8, behaviors associated with the

openness factor again show an unwillingness to be open with other faculty. While the faculty with 21+ years are more willing to share, only 30% agree that they will share their thoughts. Consequently, the majority of the faculty, regardless of experience, are unwilling to share their thoughts with each other.

Table 8 (**Note: all underlined items are reverse scored and indicate the % disagree responses)** A comparison of agree responses for faculty with differing years of teaching experience on selected behaviors associated with each of the 11 culture/climate factors.

Behavior	Factor	Years Teaching	% agreement	Kendall's Tau-b	P
I tell the truth when it needs to be told.	group trust	0-5	80.5	2.9	.004**
		6-10	78.8		
		11-15	76.2		
		16-20	86.3		
		21+	86.6		
I share my thoughts if I don't agree with what is being said or done.	group openness	0-5	21.6	4.1	.000****
		6-10	24.7		
		11-15	20.9		
		16-20	24.1		
		21+	30.9		
People at this school complain a lot.	group atmosphere	0-5	14.6	3.9	.000****
		6-10	19.7		
		11-15	22.7		
		16-20	14.6		
		21+	21.0		
The degree of cooperation between the faculty and the staff is appropriate.	group cooperation	0-5	68.8	3.2	.002**
		6-10	72.1		
		11-15	78.5		
		16-20	75.6		
		21+	79.8		
The faculty was involved in creating the mission.	sense of mission	0-5	73.7	5.4	.000****
		6-10	71.6		
		11-15	76.2		
		16-20	76.8		
		21+	85.1		
The relationship that exists between parents and the teachers is a good one	parent/community involvement	0-5	58.3	3.5	.001***
		6-10	56.3		
		11-15	66.3		
		16-20	63.9		
		21+	71.0		
The behavior of the teachers communicates that they care	classroom instruction	0-5	72.4	2.9	.004**
		6-10	81.2		

about their students.		11-15	82.6		
		16-20	82.9		
		21+	84.8		
The responsibility for student behavior is shared by staff/faculty members.	discipline	0-5	57.0	3.4	.001***
		6-10	59.9		
		11-15	61.6		
		16-20	65.6		
		21+	71.0		
Classroom instruction starts and ends on time.	assessment/time on task	0-5	70.1	3.4	.001***
		6-10	72.1		
		11-15	79.0		
		16-20	87.7		
		21+	80.2		
The administration knows what is happening in the classroom.	instructional leadership	0-5	43.4	4.0	.000****
		6-10	44.1		
		11-15	54.4		
		16-20	56.5		
		21+	58.4		
Teachers place more emphasis on regurgitation of facts than they do on application.	expectations	0-5	48.1	4.0	.000****
		6-10	52.6		
		11-15	65.1		
		16-20	61.5		
		21+	64.9		

* P < .05 **P < .01 ***P <.001 ****P <.000

The finding that faculty with 0-10 years of experience are less positive about the culture and climate of a school has further implications for the current teacher shortage. Teachers in this experience range are the most likely to leave the profession (Fredericks, 2001, Ingersoll, 2001, and Johnson et al., 2001). Ingersoll further reported that the number of teachers leaving the profession sometimes exceeds the number of new hires. He reported that in 1993-1994. 192,550 teachers entered the profession and 212,908 left. He also reported that 42% of teachers who leave the profession are dissatisfied with their jobs. His data coincides with the findings of this research where 46% of the teachers with 0-5 years experience agreed to this behavior "people at this school complain a lot"

There are a number of possible explanations for this phenomenon. According to Johnson, et al. (2001), many leave the profession due to poor working conditions and a lack of administrative support. It is also possible that administrators believe that since new teachers survived their induction year, that they are okay. Consequently, they devote most of their attention to first year teachers and tend to ignore or pay less attention to teachers in the 2-10 year experience range. This could account for the data that show more positive teachers in their first year than in their second year. Another possibility is that teachers in the second year do a reality check and realize the difficulty of the position. One other possibility is that teachers are so busy during their first year that they have not had

time to look beyond their classroom, and that is why they tend to be more positive. During years 2-10, they begin noticing what is happening in the rest of school, and that is why they are less positive. Regardless, these data send a clear message that administrators need to spend more time with teachers in this experience range. They are at-risk of leaving the profession, and with the teacher shortage, they cannot be ignored. According to Ingersoll (2001), a new approach to solving school staffing problems is needed: "decrease the demand for new teachers by decreasing turnover" (p.7).

The fact that more experienced teachers are the most positive about culture and climate is encouraging. This could be because they are more satisfied with their careers, have honed their craft, and are more able to deal with problems that arise. However, the data in Table 5 clearly show that school culture is not very positive as none of the four culture variables have a score of 32 (an agree response) and only three of the climate factors have an agree response for experienced faculty. These data support the conclusion of Ingersoll (2001) that the organizational climate found in most schools is impersonal and alienated. He goes on to say that most teachers choose to stay or leave because of organizational conditions.

The behavior in Table 8 "the administration knows what is happening in the classroom" in the instructional leadership factor had agree responses in the 40-50% range. Faculty responses, indicating that the administration "sometimes" knows what is happening, were in the 30% range. More teachers with less than 10 years experience disagreed (21%) with this statement compared to those with more than 10 years (12%). The opposite should have occurred. Administrators should be more aware of what is happening in the classrooms of teachers with less experience. Ingersoll (2001) reported that 30% of the teachers who left the profession were dissatisfied with the amount of administrative support. If administrators want to be instructional leaders, they will have to pay more attention to what is going on in classrooms.

The finding that female faculty were more positive on all culture/climate factors than male faculty was somewhat disturbing. Both researchers in this study are former superintendents, and their experience would not have led them to this conclusion. Consequently, a separate analysis was completed on male and female faculty at the elementary and secondary levels to see if the more positive female responses were the result of more elementary female faculty. Female faculty at the elementary level were more positive on all 11 culture/climate factors. However, only six of the factors were statistically significant compared to 10 that were significant in the prior comparison. When comparing the secondary data, female faculty were the same on three of the factors, and more positive on the remaining eight, and six of those were statistically significant. The results of this analysis were very similar to the previous analysis: Female faculty are more positive about the culture and climate of their school, regardless of grade level.

Limitation of the study

The 11 factors that are used to analyze a school's culture/climate do not measure all of the factors that can affect a school. For example, the four culture variable of openness, trust, cooperation, and atmosphere represent only a part of the value and belief system that affect that school's culture. There could be and probably are other factors. However, the ones that were chosen to be measured by the survey are the ones believed to be the most important for a school's culture/climate.

Conclusions

The lack of openness that exists on most faculties is a real concern and should be addressed by administrators. This could help with one of the other major concerns, and that is the lower culture and climate scores for male faculty. Perhaps, the most important finding of this research is the lower scores for faculty after their first year of teaching. Faculty with 2-10 years experience are the most-at-risk of leaving the profession. Administrators need to provide more administrative support and continue with mentoring activities after the first year. School administrators also need to pay more attention to the culture and climate of their schools. One of the best ways to keep teachers from leaving the profession is to make sure the culture and climate of the school is positive.

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Appendix A

A MEASURE OF SCHOOL CULTURE AND CLIMATE

The measure of school culture has four variables as follows: group openness, group trust, group cooperation, and group atmosphere. The measure of school climate has seven variables as follows: sense of mission, instructional leadership, student discipline, parent involvement, assessment/time on task, teaching practices, and expectations. **All underlined items are negative and must be reverse scored.**

Definitions of each variable and the items which measure them are as follows:

GROUP TRUST = an interpersonal condition that exists when interpersonal relationships are characterized by an assured reliance or confident dependence on the character, ability, predictability, confidentiality, and truthfulness of others in the group.

Believe what you hear others say.

Question others' intentions and /or motives.

Conceal your true feelings to what others do and/or say.

Keep your distance from others.

Count on others for assistance.

Have faith in others' ability.

Believe that others care about you.

Deal with them directly when there is a problem.

Tell them interesting gossip or rumors you know about someone.

Know that they will respond favorably in a situation where your welfare is at stake.

Share information that they are to keep confidential.

Believe that they are honest.

Count on them to do what they say they are going to do.

Tell the truth when it needs to be told.

Respect the opinions of your colleagues.

Admit mistakes and/or problems when necessary.

Support their ideas, decisions, and actions.

Behave consistently regardless of the person or situation, or level of stress.

GROUP OPENNESS = an interpersonal condition that exists between people when: (1) facts, ideas, values, beliefs, and feelings are shared; and (2) the recipient of a transmission is willing to listen.

Tell others what you think of the way they do things.

Tell others what you think of their ideas.

Tell others what you think of their educational values and beliefs.

Express your feelings.

Ask others what they think about the way you do things.

Ask others what they think about your ideas.

Ask others what they think about your educational values and beliefs.

Ask others about their feelings.

Accept others comments and reactions.

Disagree with others if you don't agree with what is being said or done.

Share positive thoughts with others instead of keeping them to yourself.

Share constructive criticism with others instead of keeping it to yourself.

GROUP COOPERATION = an interpersonal condition that exists between the various constituents (teachers, staff, students, parents, and community) in the school setting.

Teachers are involved in the decision-making process.

A school leadership team or advisory council assists the administration with decisions.

A student leadership team or advisory council assists the administration with decisions.

A parent leadership team or advisory council assists the administration with decisions.

The administration of this school keeps the constituents in the school setting adequately informed.

The constituents in the school setting are encouraged to communicate with the administration.

The degree of cooperation between the faculty and the administration is appropriate.

The degree of cooperation between the faculty and the staff is appropriate.

GROUP ATMOSPHERE = a supportive interpersonal condition that exists between the constituents (teachers, staff, students, parents, and community) in the school setting.

The feeling that people care about each other is present in the school.

The physical condition of the school facility is acceptable.

People at this school complain a lot.

Faculty and staff morale at this school is low.

Teachers are sensitive and responsive to the needs of students.

The administration is sensitive and responsive to the needs of teachers.

The administration shows favoritism to some constituents.

There is a feeling of togetherness/community at this school.

SENSE OF MISSION = the degree to which the faculty agrees on a philosophy of education and is committed to the school's goals and objectives.

The school's mission is posted for everyone to see.

A short phrase that captures the school's mission has been developed and placed in conspicuous places, e.g., on stationery, buses, etc.

The administration creates opportunities for the mission/vision to be shared with constituents.

The faculty was involved in creating the mission.

A mission statement has been created, but it is not seen or shared.

The faculty is in agreement as to the mission of the school.

The mission statement is of little value for what happens at our school.

If asked, the faculty are able to describe the school's mission statement.

PARENT INVOLVEMENT = the administration has created an environment that encourages parents to be involved.

Parents are recruited to serve as volunteers at the school.

The administration supports some form of media (newsletter, computer, etc.) to communicate with constituents on a regular basis.

The relationship that exists between parents and the teachers is a good one.

The relationship that exists between parents and the administration is a good one.

It is easy for parents to find out how their child(ren) is/are doing academically.

It is easy for parents to find out what their child(ren) must do for homework.

The administration has recruited business/community partners.

Volunteers who participate at the school are recognized for their efforts.

TEACHING = the degree to which teachers use appropriate instructional strategies to promote student achievement.

Teachers vary their instructional strategies according to the needs of the students.

The behavior of the teachers communicates that they care about their students.

Homework assignments are appropriate for the student and subject.

Teachers explain the objective(s) of the activity or lesson for the day.

Teachers at this school are unable to control students in their classroom.

Teachers motivate the students to want to learn.

Teachers review previous work before introducing new material.

Teachers help students to feel good about themselves.

DISCIPLINE = the degree to which the administration and teachers are able to control the behavior of the students

The atmosphere in the classroom is conducive to learning.

The procedure the administration has in place for office referrals and discipline is effective.

The degree of communication with teachers about an office referral is appropriate.

Students' safety is a problem at this school.

The administration supports teachers in matters related to student discipline.

The responsibility for student behavior is shared by staff/faculty members.

Communication with parents about student misbehavior is appropriate.

The administrative plan for dealing with student absences and tardies is appropriate.

ASSESSMENT/TIME ON TASK = what the teachers and administration do to monitor student achievement and time on task.

Student achievement data are monitored by the administration.

Student achievement data are used to provide feedback to teachers.

Student achievement data are used to evaluate the effectiveness of a program or change in the curriculum.

Teachers' grading practices are based on a variety of activities that monitor student learning.

Classroom instruction starts and ends on time.

The administration does their best to minimize time lost due to pull out programs and/or extra-curricular activities.

The administration does their best to minimize time lost due to classroom interruptions.

Teachers' classroom management practices are effective in keeping students on task.